

# Shooting Up

Infections among injecting drug users in the UK 2009

An update: November 2010



# Key messages

- 1.** Needle and syringe sharing has declined in recent years, but almost one-fifth of injecting drug users continue to share.
- 2.** Infections are common among injecting drug users. Around one-half of injecting drug users have been infected with hepatitis C, one-sixth with hepatitis B, and about one-third reported a symptom of a bacterial infection (such as a sore or abscess) at an injecting site in the past year.
- 3.** The prevalence of HIV among those who have injected drugs remains low and is estimated to be 1.5% overall in the UK. However, it varies across the country from 0.6% in Scotland to 4.1% in London.
- 4.** The prevalence of HIV among current injectors has increased from 0.7% to 1.5% over the past decade, and is now similar to the level found in the early 1990's.
- 5.** The uptake of HIV testing is improving, with three-quarters of injecting drug users now reporting that they have had a test; however, almost a third of injecting drug users with HIV remain unaware of their infection.
- 6.** The vast majority of HIV-infected injecting drug users in contact with specialist HIV treatment services are receiving antiretroviral therapy.

Health Protection Agency, Health Protection Scotland, Public Health Wales, CDSC Northern Ireland, and the CRDHB. Shooting Up: Infections among injecting drug users in the United Kingdom 2009. London: Health Protection Agency, November 2010.

Injecting drug users (IDUs) are vulnerable to a wide range of viral and bacterial infections. These infections can result in high levels of illness and death, so public health surveillance of infectious diseases and associated risk, as well as of protective behaviours among this group are important. This report describes time trends on the extent of infections among IDUs in the UK, and is based on data to the end of 2009. This year's report focuses on HIV infection.

## HIV

Transmission of HIV through injecting drug use was recognised early in the HIV epidemic, when explosive outbreaks of HIV infection among IDUs occurred in many countries.

### HIV diagnoses

Between the beginning of the 1980s and the end of 2009 there had been a cumulative total of 5,272 HIV diagnoses reported<sup>a</sup> in the UK where infection was thought to have been acquired through injecting drug use. These accounted for 5.0% of the cumulative total (106,252<sup>b</sup>) of HIV diagnoses in the UK, 3.9% (3,876/98,204) of those in England, 24% (1,324/5,621) in Scotland<sup>c</sup>, 3.3% (56/1,701) in Wales and 2.3% (16/696) in Northern Ireland.

The number of new HIV diagnoses among IDUs in recent years has been low and relatively stable, averaging 161 reports each year from 2000 to 2009. So far, 149 new HIV diagnoses were reported in this group for 2009 (51 in London, 13 in Scotland and 85 elsewhere, Appendix Table 1). The proportion of HIV infections among IDUs newly diagnosed in the UK outside of London and Scotland, has increased from 39% (334/861) during 1995-99 to 52% (469/902) during 2005-09. The

probable country of infection was reported for 66% (98) of new diagnoses in 2009. Where reported, 56% (55) of infections were probably acquired within the UK and 44% (43) outside the UK, mostly in Northern and Eastern Europe.

### HIV-infected IDUs receiving care

The number of HIV-infected IDUs seen for HIV treatment and care in the UK has increased year-on-year during the past decade. In 2009, 1,547 IDUs were seen for HIV treatment and care, an increase of 18% since 2000, when 1,313 IDUs were seen. Whilst the total number of HIV-infected patients seen for care in Scotland increased between 2000 and 2009, the proportion infected through injecting drug use declined: 315 HIV-infected IDUs received care in 2009 compared to 419 in 2000.

Across the UK, IDUs accounted for only 2.5% (1,547/62,194) of all HIV-infected adults (aged over 15 years) seen for care in the UK in 2009, having fallen gradually from 6.0% in 2000 (1,313/21,730). In 2009, 71% (1,091/1,547) of HIV-infected IDUs were male and 88% (1,346/1,526) were white, and 79% (1,209/1,535) were receiving antiretroviral therapy, compared to 61% (738/1,210) in 2000.

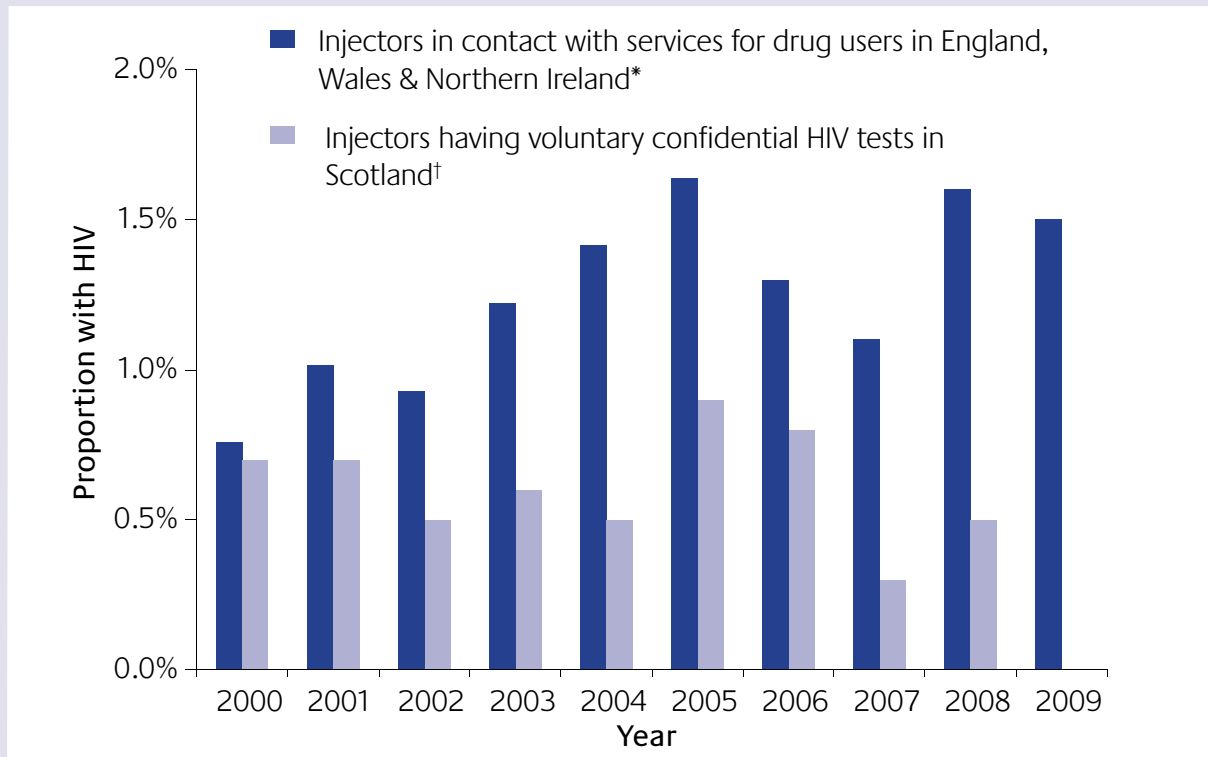
Of the IDUs seen for HIV-related care in 2009, around 37% (510/1,390) had CD4 counts of 350 cells per mm<sup>3</sup> or less - the level at which it is recommended to start antiretroviral therapy<sup>1</sup>. Equivalent figures were 20% (5,151/25,301) among men who have sex with men (MSM), and 30% (8,882/29,638) among heterosexuals. In 2009, of the 510 IDUs seen for care with CD4 counts of 350 or less, 90 (18%) were not on treatment; this is comparable to other risk groups (20% among MSM and 15% among heterosexuals).

<sup>a</sup> Based on reports received at the Centre for Infections by the end of June 2010.

<sup>b</sup> Includes 30 individuals where region of diagnosis is not known.

<sup>c</sup> The high overall proportion of IDUs among the diagnosed HIV infections in Scotland reflects individuals who were infected and diagnosed early in the epidemic. Since 2002 IDUs have accounted for around only one in twenty of new HIV diagnoses in Scotland.

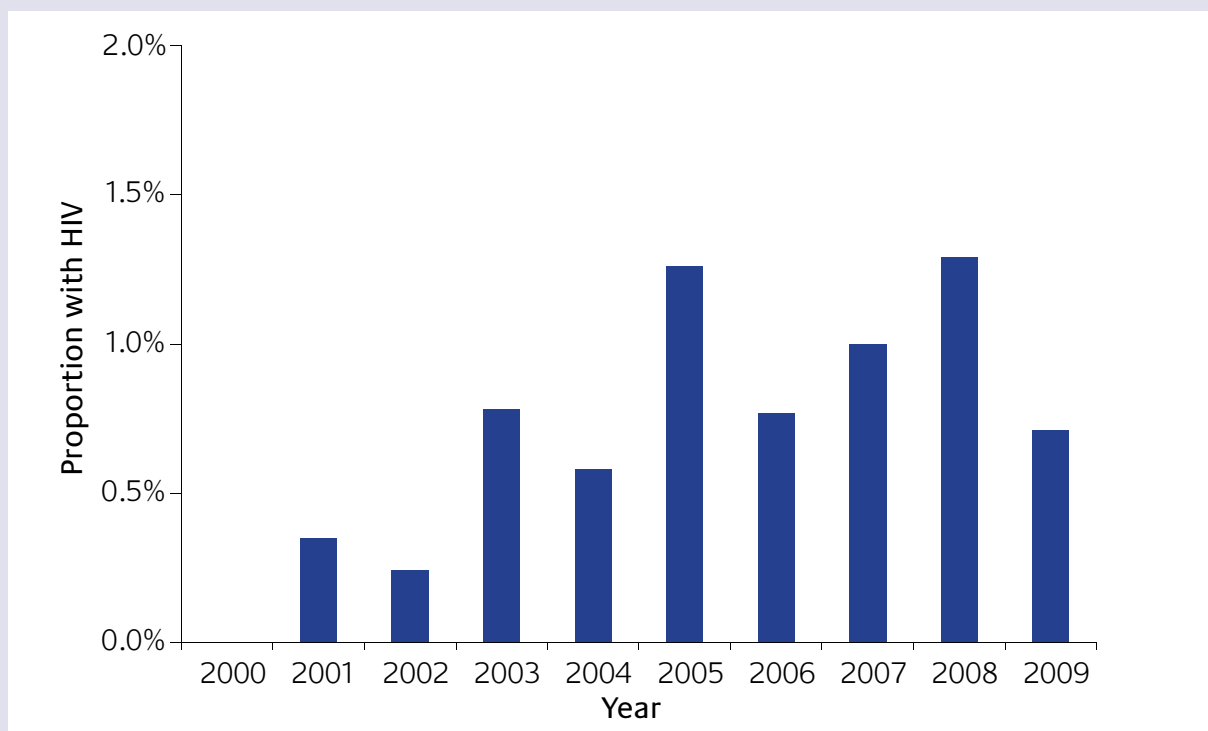
**Figure 1: The prevalence of HIV infection among current and former injecting drug users: 2000 to 2009**



\* Data from Unlinked Anonymous Monitoring survey of injecting drug users in contact with specialist services. Includes Northern Ireland from 2002.

† Data for 2009 was not available at the time of publication.

**Figure 2: The prevalence of HIV infection among recently† initiated injecting drug users in England, Wales & Northern Ireland\*: 2000 to 2009**



† Those who started injecting drugs during the three years prior to participating in the survey.

\* Includes Northern Ireland from 2002.

Data Source: Data from Unlinked Anonymous Monitoring survey of injecting drug users in contact with specialist services.

## HIV prevalence among IDUs

The overall HIV prevalence among IDUs in 2009 was similar to that seen in recent years. Among those participating in the Unlinked Anonymous Monitoring (UAM) survey of current and former IDUs in England, Wales and Northern Ireland, the overall prevalence of antibodies to HIV was 1.5% (49/3,289) in 2009 (Figure 1). In London, the prevalence was 4.1% (24/591, 95%CI 2.6%-6.0%) while elsewhere in England it was 0.93% (22/2,371, 95%CI 0.58%-1.4%). In Northern Ireland the prevalence was 1.3% (2/153, 95%CI 0.16%-4.6%) and in Wales it was 0.57% (1/174, 95%CI 0.01%-3.2%).

The UAM survey indicates that HIV transmission among IDUs might have increased in recent years. HIV prevalence among recent initiates (those who reported first injecting during the previous three years) is a measure of recent transmission. The prevalence among recent initiates participating in the UAM survey was 0.71% (3/421) in 2009. Prevalence in this group remains higher than it was prior to 2003 (Figure 2); no HIV infections were detected in this group in 2000 (0/787)<sup>d</sup>.

In Scotland, the prevalence of HIV among IDUs is monitored through the surveillance of people undergoing voluntary confidential HIV testing. An HIV prevalence of 0.55% (13/2,381) among IDUs undergoing testing in Scotland was found during 2008. This compares with a prevalence of 1.4% to 3.2% in the early to mid-1990s and 0.3% to 0.9% during the period 1998 to 2007 (Figure 1).

Current IDUs, those who have injected drugs in the past four weeks, are an important group because they will have been at recent risk of HIV infection. In 2009 the overall HIV prevalence among current IDUs taking part in the UAM

survey in England, Wales & Northern Ireland was 1.5% (28/1,874) - this is twice the level seen in this group in 2000 when prevalence was 0.72% (17/2,364)<sup>e</sup> (Figure 3). This increase has been focused outside London, where the prevalence was 0.20% (4/2,040) in 2000 and remained at around that level until 2003 (0.32%, 4/1,240). Subsequently, it increased to 0.63% (8/1,264) in 2004, and has remained elevated since then; it was 0.74% (12/1,627) in 2009<sup>f</sup>. In Scotland, 633 IDUs (involving 452 current IDUs) were surveyed at settings that provided needle and syringe programmes (NSP) in three Health Boards during 2007. Only one respondent tested positive for HIV antibodies (0.16%, 95%CI 0.004%-0.88%); none of the current IDUs tested positive.

## HIV testing uptake among IDUs

Among IDUs, there has been an increase in the uptake of HIV testing in recent years. In 2009, 25% of IDUs (782/3,126; 95%CI 24%-27%) who took part in the UAM survey reported **never** having had a voluntary confidential test for HIV. This is the lowest level ever recorded in this survey (Figure 4). Between 1990 (when the UAM survey started) and 2003, the uptake of HIV testing changed little, with 42% (1,126/2,651; 95%CI 41%-44%) reporting never having had a test in 2002.

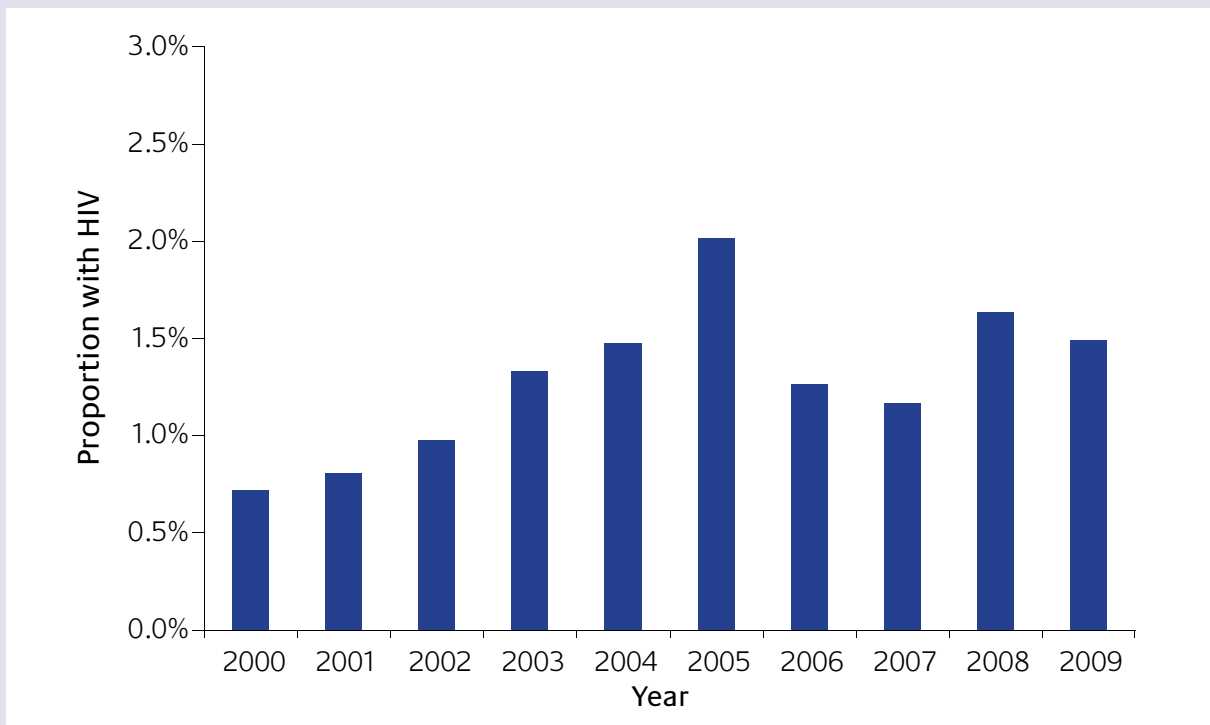
Awareness of HIV infection in 2009 was comparable to previous years. Of the participants in the UAM survey who had antibodies to HIV, 63% (27/43; 95%CI 47%-77%) were aware of their infection in 2009, which is similar to the levels seen in recent years (Figure 4).

<sup>d</sup> After adjusting for age, gender, and if recruited in London or elsewhere in a multi-variable analysis the odds ratio for a one-year increase in time was 1.19 (95%CI 1.05-1.36) indicating an annual increase of 19%.

<sup>e</sup> After adjusting for age, gender, and for region of recruitment in a multi-variable analysis the odds ratio for 2009 was 2.22 (95%CI 1.18-4.19) compared to 1.0 in 2000, indicating an over two-fold increase.

<sup>f</sup> After adjusting for age, gender, and for region of recruitment in a multi-variable analysis the odds ratio for 2009 was 3.97 (95%CI 1.26-12.5) compared to 1.0 in 2000, indicating a four-fold increase.

**Figure 3: The prevalence of HIV infection among current<sup>‡</sup> injecting drug users in England, Wales & Northern Ireland\*: 2000 to 2009**

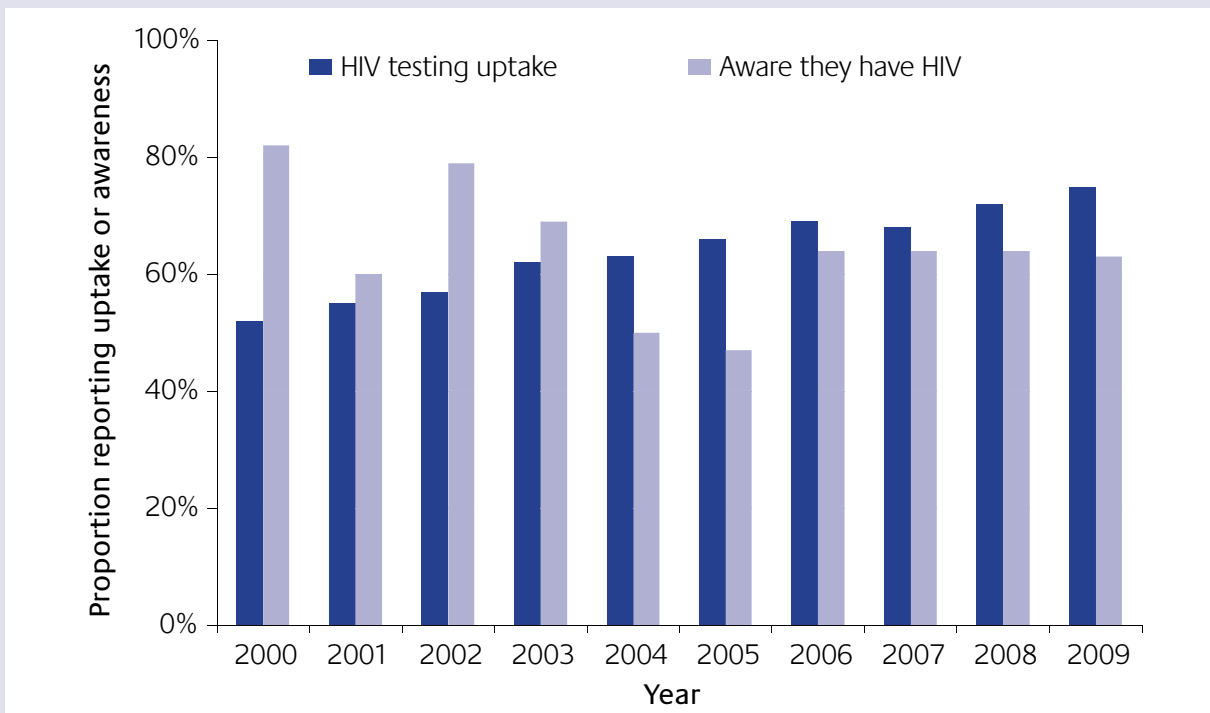


<sup>‡</sup> Those who had last injected during the preceding four weeks.

\* Includes Northern Ireland from 2002.

Data Source: Data from Unlinked Anonymous Monitoring survey of injecting drug users in contact with specialist services.

**Figure 4: Uptake of voluntary confidential testing for HIV among current & former injectors and self-reported awareness of HIV positivity among current & former injectors with antibodies to HIV in England, Wales & Northern Ireland\*: 2000 to 2009**



\* Includes Northern Ireland from 2002.

Data Source: Data from Unlinked Anonymous Monitoring survey of injecting drug users in contact with specialist services.

## UPDATE ON OTHER INFECTIONS & BEHAVIOURS

Information on the extent of other infections and key behaviours among IDUs can be found in the three tables appended to this report<sup>9</sup>. Key points are summarised below.

**Hepatitis C:** In 2009, 11,005 hepatitis C infections were diagnosed in the UK, and around 90% of these infections will have been acquired from injecting drug use (Table 1). UK wide data indicate that around half of IDUs are hepatitis C antibody positive: with 47% of the IDUs surveyed in England, Wales and Northern Ireland and 55% of those surveyed in Scotland having antibodies to hepatitis C (Table 1). Current levels of hepatitis C transmission among IDUs probably remain higher than a decade ago, as 24% of recent initiates participating in the UAM survey were infected in 2009 compared with 12% in 2000 (Table 1). Uptake of voluntary confidential testing for hepatitis C has increased among IDUs with the proportion reporting ever having been tested in England, Wales and Northern Ireland rising from 49% in 2000 to 81% in 2009. Uptake of testing among those attending NSP in Scotland during 2008-09 was 74% (Table 3).

**Hepatitis B:** The transmission of hepatitis B continues among IDUs, but may have declined in recent years as the proportion of participants in the UAM survey ever infected has fallen

from 28% in 2000 to 17% in 2009 (Table 1). In England, Wales and Northern Ireland reported uptake of the hepatitis B vaccine (i.e. accepting at least one dose) by IDUs has increased from 35% in 2000 to 73% in 2009 (Table 3). Uptake of vaccination among those attending NSP in Scotland during 2008-09 was 68% (Table 3).

**Bacterial infections:** Injecting site infections remain common with 32% of IDUs participating in the UAM survey in 2009 reporting an abscess, sore, or open wound at an injecting site during the preceding year (Table 2). Illnesses associated with meticillin-resistant *Staphylococcus aureus* and group A streptococcal infection are continuing to be reported among IDUs (Table 2). There were also 22 cases of wound botulism and one case of tetanus reported in IDUs in 2009 (Table 2). In December 2009 there was the first reported case of anthrax among IDUs in the UK (see Box).

**Risk Behaviours:** The level of needle and syringe sharing reported in England, Wales and Northern Ireland has declined from 31% in 2000 to 19% in 2009 (Table 3). In Scotland 19% of IDUs reported needle and syringe sharing in 2008/09 (Table 3).

### Box: Anthrax Outbreak

Anthrax is a very rare infection caused by a bacterium that produces spores. These spores can survive in the environment for a long time and so can contaminate heroin during production or distribution. The first confirmed case of Anthrax among a drug user in the UK was reported in December 2009. Up to 30 September 2010 there had been a total of 51 cases reported in the UK (47 in Scotland and four in England); of which 16 had died. During this period, two cases were also reported in Germany. There were no reports from elsewhere in Europe. In response to the cases, advice and information was issued to drug users and those who work with them<sup>2</sup>.

<sup>9</sup> Full data from the UAM survey can be found in the survey data tables at: [www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1202115519183](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1202115519183)

## CONCLUSIONS & RECOMMENDATIONS

Even though the level of injecting-related equipment sharing has declined in recent years, large numbers of IDUs continue to report injecting practices that put them at risk of acquiring infections. As a consequence, HIV, hepatitis B and C infections are continuing to occur among IDUs in the UK. The HIV prevalence among recent initiates to injecting suggests that HIV transmission among IDUs may be higher now than it was a decade ago. Whilst combining data from across the UK suggests that about one in six IDUs have been infected with hepatitis B, and around half have been infected with hepatitis C. In addition, bacterial infections remain a problem among IDUs. Interventions that aim to prevent infections among IDUs therefore need to be sustained and the levels of provision reviewed to ensure adequate coverage <sup>3, 4, 5</sup>.

Those commissioning community-based services to reduce the harm associated with injecting drug use should give appropriate priority to preventing the spread of infections among IDUs and reducing the harm that these infections cause. Responses should be in line with national strategies <sup>6, 7, 8, 9, 10</sup>, relevant action plans <sup>11, 12, 13, 14, 15</sup>, related guidance <sup>16, 17, 18, 19, 20, 21, 22, 23, 24, 25</sup> and local needs assessments <sup>26</sup>, through the provision of:

1. Easy access to the following services through drug treatment services, general practitioners and needle and syringe programmes (NSP):
  - a) Information and advice on safer injecting practices, avoiding injecting site infections, preventing blood-borne virus transmission and the safe disposal of used equipment.
  - b) Hepatitis B vaccination and, as appropriate, tetanus and hepatitis A vaccination.
  - c) Diagnostic testing for HIV and hepatitis C, and care pathways for those infected.
  - d) Health checks and treatment for injection site infections.
  - e) Interventions to decrease or stop injecting and to support safer injection practice where it continues.
2. A range of easily accessible NSP for those unable to stop injecting (including those using drug treatment services). These programmes should distribute sufficient injecting-related equipment to prevent sharing and to support hygienic injecting practice as is appropriate. They should also offer interventions that support entry into drug treatment.
3. Drug treatment services that encourage drug users to reduce and cease injecting, and reduce or stop their drug use.



**Appendix**

Table 1: Summary of indicators of viral hepatitis and HIV transmission among injecting drug users in the United Kingdom

Indicator	Area	Sub-Category		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Hepatitis C infection</b>													
Reported laboratory diagnoses of hepatitis C infection*	England	Total number of reports: All exposures	n	4,484	4,148	4,756	5,518	6,187	6,162	6,861	7,757	8,132	8,605*
		Proportion of all reports, with exposure data, indicating injecting drug use#	%	91	95	96	95	96	96	95	98	99	97
	Wales	Total number of reports: All exposures	n	300	256	284	262	184	274	311	286	167	207*
		Proportion of all reports, with exposure data, indicating injecting drug use#	%	96	96	98	100	100	100	100	100	100	-
	Scotland	Total number of reports: All exposures	n	1,875	1,685	1,792	1,649	1,658	1,615	1,532	1,550	1,695	2,081
		Proportion of all reports, with exposure data, indicating injecting drug use#	%	93	94	92	92	92	89	86	89	86	89
	Northern Ireland	Total number of reports: All exposures	n	54	65	75	86	100	134	135	114	132	112
		Proportion of all reports, with exposure data, indicating injecting drug use#	%	82	75	89	86	100	93	100	100	88	-
Proportion hepatitis C antibody positive <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current & former injectors	%	38	39	42	46	45	45	44	43	43	47
		First injected during the preceding 3 years	%	12	20	16	21	21	18	23	23	24	24
Prevalence among those having voluntary confidential HIV tests	Glasgow	Injectors: All ages	%	62 <sup>††</sup>	-	64	-	-	67	72	63	-	
		Injectors: Age under 25 years	%	41 <sup>††</sup>	-	42	-	-	51	36	35	-	
Proportion hepatitis C antibody positive <sup>§</sup>	Scotland	Current & former injectors	%	-	-	-	-	-	-	-	-	55	
		Injectors with less than 3 years since onset of injecting	%	-	-	-	-	-	-	-	-	24	
<b>Hepatitis B infection</b>													
Reported laboratory diagnoses of hepatitis B infection*	England <sup>†</sup>	Total number of reports: All exposures	n	704	554	829	676	-	-	-	-	-	-
		Proportion of all reports, with exposure data, indicating injecting drug use#	%	46	37	37	38	-	-	-	-	-	-
	Wales <sup>†</sup>	Total number of reports: All exposures	n	24	44	55	25	-	-	-	-	-	-
		Proportion of all reports, with exposure data, indicating injecting drug use#	%	35	39	69	27	-	-	-	-	-	-
	Scotland <sup>**</sup>	Total number of reports: All exposures	n	360	357	354	342	341	372	375	475	615	775
		Proportion of all reports indicating injecting drug use#	%	25	19	11	6.4	6.5	5.9	3.5	1.7	0.3	0.9
Northern Ireland <sup>***</sup>	Total number of reports: All exposures	n	42	37	67	62	59	72	76	104	101	87	
Proportion hepatitis B antibody positive <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current & former injectors	%	28	28	29	30	28	26	28	20	18	17
		First injected during the preceding 3 years	%	9.3	11	9.1	12	8.9	9.4	14	6.3	3.1	7.1
<b>HIV infection</b>													
Reports of new diagnoses of HIV infection through injecting drug use*	London	Total number of reports: Injecting drug use	n	54	58	67	71	66	68	103	78	61	51
	Scotland	Total number of reports: Injecting drug use	n	17	17	12	13	11	20	16	7	16	13
	Rest of UK	Total number of reports: Injecting drug use	n	48	67	49	85	70	100	85	95	104	85
	UK	Total number of reports: Men who have sex with men also reporting injecting drug use	n	32	20	27	22	16	20	14	13	11	14
Prevalence among those having voluntary confidential HIV tests	Scotland	All injectors tested	%	0.7	0.7	0.5	0.6	0.5	0.9	0.7	0.3	0.5	††
Proportion HIV antibody positive <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current & former injectors	%	0.8	1.0	0.9	1.2	1.4	1.6	1.3	1.1	1.6	1.5
		First injected during the preceding 3 years	%	0	0.4	0.2	0.8	0.6	1.3	0.8	1.0	1.3	0.7

# Data on exposure is often incomplete or missing.

\* Numbers may be subject to revision due to reporting delay.

\*\* Scottish data cannot reliably distinguish between acute and chronic hepatitis B infection.

\*\*\* Northern Ireland data prior to 2003 could not distinguish between acute and chronic hepatitis B infection: 2003 there were 12 acute cases, 20 in 2004, 20 in 2005, 17 in 2006, 26 in 2007, 19 in 2008 and 26 in 2008.

† Publication of hepatitis B surveillance was stopped between 2004 and 2007 due to problems with the routine laboratory surveillance system. Cases of acute hepatitis B are now reported nationally from local health protection units (HPUs) and combined with laboratory data. A total of 597 cases of acute hepatitis B were reported in England during 2009; 620 cases were reported in 2008. Of the 398 acute and probable acute cases reported by HPUs in 2009, 226 (57%) had associated exposure information. The commonest reported risk factor for acute cases was heterosexual exposure, reported in 143 (63% of cases with known exposure). Injecting drug use was implicated in 30 (13%) cases.

^ Includes Northern Ireland from 2002.

~ Unlinked Anonymous Monitoring survey of injectors in contact with drug services: [www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1202115519183](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1202115519183)

‡ Denotes past or current infection with hepatitis B/C. Prior to 2009 this survey only collected oral fluid samples, however in 2009 both oral fluid and dried blood spot (DBS) samples were collected from participants. The sensitivities of the tests on DBS samples for antibodies to hepatitis C and hepatitis B core antigen are almost 100%. However, the sensitivity of the Oral Fluid sample test for antibodies to hepatitis C is about 92% and that for antibodies to the hepatitis B core antigen is about 75%. Results presented are adjusted to allow for the poorer sensitivity of the tests on the Oral Fluids samples.

§ Among individuals participating in a voluntary anonymous survey of injectors attending needle exchange services.

†† Data for 2009 was not available at the time of publication.

‡‡ Data is for 1999-2000.

Table 2: Summary of indicators of bacterial infections among injecting drug users in the United Kingdom

Indicator	Area	Sub-Category		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Spore forming bacterial infections													
Reported cases of Wound Botulism	UK	Exposure injecting drug use	n	5	4	19	15	41	28	22	3	4	22
Reported cases of Tetanus	UK	Exposure injecting drug use	n	0	0	0	11	15	5	0	2	0	1
Group A streptococci (GAS) infections													
GAS isolate referrals to the HPA's Streptococcus and Diphtheria Reference Unit	UK	Isolates with risk factor injecting drug use	n	28	49	136	286	122	46	47	31	27	14
		Proportion of all sterile site isolates	%	3.6	6.7	15	22	11	4.5	3.9	3.4	2.2	0.9
Meticillin-resistant <i>S. aureus</i> (MRSA) infections													
Mandatory enhanced surveillance of MRSA bacteraemias*	England	Isolates with risk factor injecting drug use	n	-	-	-	-	-	-	31	70	47	27
		Proportion of all isolates, with exposure data, indicating injecting drug use#	%	-	-	-	-	-	-	3.4	3.6	3.3	3.1
Symptoms of a possible injection site bacterial infection													
Having had an abscess, sore, or open wound at an injection site in last year: self-reports <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Injecting drug users who had last injected during the preceding 12 months**	%	-	-	-	-	-	-	32	34	31	32

Table 3: Summary of indicators of risk and protective behaviours related to infections among injecting drug users in the United Kingdom

Indicator	Area	Sub-Category		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Risk Behaviours													
Passing on or receiving used needles or syringes in the last month: self reported <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current injectors	%	31	33	34	29	28	28	23	23	19	19
		Current injectors aged ≤ 24	%	31	36	44	37	36	38	29	26	22	27
		Current injectors who first injected during the preceding 3 years	%	24	28	33	28	27	28	21	25	17	17
Sharing of needles and syringes in past month: agency reports <sup>§</sup>	Scotland	Current injectors	%	34	35	33	34	31	27	-	-	-	-
			%	-	-	-	-	-	-	22	19	19	-
Sharing of any injecting equipment in past month: self reported <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current Injectors	%	60	59	60	55	55	53	48	47	41	37
Markers of health care utilization													
Ever used a needle and syringe programme: self reported <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current & former injectors	%	88	90	90	90	88	90	91	92	91	92
Ever had a voluntary confidential test for hepatitis C: self reported	England, Wales & Northern Ireland <sup>^~</sup>	Current & former injectors	%	49	54	58	63	67	71	75	74	77	81
	Scotland <sup>§</sup>	Current & former injectors	%	-	-	-	-	-	-	-	-	74	
Proportion of those unaware that they have hepatitis C infection: self reported	England, Wales & Northern Ireland <sup>^~</sup>	Current & former injectors anti-HCV positive	%	61	59	58	54	49	48	45	48	50	49
	Scotland <sup>§</sup>	Current & former anti-HCV positive injectors	%	-	-	-	-	-	-	-	-	54	
Hepatitis B vaccine uptake (receiving at least one dose of Hepatitis B vaccine): self reported	England, Wales & Northern Ireland <sup>^~</sup>	First injected during the preceding 3 years	%	26	28	36	42	51	46	61	54	62	68
		Current & former injectors	%	35	37	43	50	56	59	65	66	72	73
	Scotland <sup>§</sup>	Injectors with less than 3 years since onset of injecting	%	-	-	-	-	-	-	-	-	-	51
		Current & former injectors	%	-	-	-	-	-	-	-	-	-	68
Ever had a voluntary confidential test for HIV: self reported <sup>~</sup>	England, Wales & Northern Ireland <sup>^~</sup>	Current & former injectors	%	52	55	58	62	63	66	69	68	72	75
Proportion of those unaware that they have HIV infection: self reported <sup>~</sup>	England, Wales & Northern Ireland <sup>^</sup>	Current & former injectors anti-HIV positive	%	18	40	21	31	50	53	36	36	36	37

# Data on exposure is often incomplete or missing.

\* Data on MRSA among IDUs is also available from HPA Staphylococcus Reference Unit (SRU). Between April 2003 and December 2008 SRU received 74 isolates from injecting drug users with sepsis due to a community-associated MRSA clone known as ST1-MRSA-IV which does not encode the Panton-Valentine Leukocidin (PVL) toxin. These cases have been identified from geographically distinct areas throughout England and Wales. No cases of this clone were identified among IDUs in 2009.

\*\* Abscess, sore or open wound at an injection site in last year data. Year (numerator/denominator): 2006 (668/2,072); 2007 (803/2,330); 2008 (654/2,138); 2009 (665/2,086).

^ Includes Northern Ireland from 2002.

~ Unlinked Anonymous Monitoring survey of injectors in contact with drug services: [www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1202115519183](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1202115519183)

¶ Scottish drug misuse database: data are for financial years, for example, 2002 data relates to 2002/03 financial year. The data collection process for the Scottish Drug Misuse Database (SDMD) was revised in April 2006 and is not directly comparable.

§ Among individuals participating in a voluntary anonymous survey of injectors attending needle exchange services.

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## DATA SOURCES:

### Reports of HIV infection

Voluntary confidential reports of new HIV diagnoses are received from laboratories and clinicians in England, Wales, and Northern Ireland by Centre for Infections (CfI). Scottish and paediatric data is collected locally and incorporated with data from England, Wales and Northern Ireland, at the end of each six month period to produce the current UK dataset. Surveillance began in 1982 with AIDS case reporting and expanded to include laboratory reporting of HIV diagnoses in 1985. In England, Wales and Northern Ireland, clinician HIV reports were introduced in 2000 to supplement laboratory reporting, and the AIDS information is now collected on the clinician HIV report.

### HIV-infected individuals accessing HIV-related care

A cross-sectional survey is carried out to identify all individuals with diagnosed HIV infection who attend for HIV-related care at NHS sites in England, Wales and Northern Ireland within a calendar year. Scottish and paediatric data is collected locally and incorporated annually to create a UK dataset. This survey has been repeated annually since 1995.

### Laboratory reports of viral hepatitis and bacterial infection

Clinically significant infections diagnosed in England, Wales and Northern Ireland are routinely reported to CfI and held on a central system known as LabBase2. Most laboratories participate in the system, even if reporting is not mandatory. LabBase2 is, therefore, one of the most comprehensive sources of surveillance data, covering nearly all microbiologically-confirmed infections. Data on infections caused by hepatitis B and C were all extracted from this reporting system. These reports contain demographic and risk information, although the risk factor information is not always

provided. For acute hepatitis B laboratory surveillance data for England is combined with data collected from Health Protection Units. In Scotland, HPS collates data on all confirmed hepatitis C antibody tests from the main hepatitis C testing laboratories in Glasgow, Edinburgh, Dundee and Aberdeen.

### The Unlinked Anonymous Monitoring (UAM) survey of injecting drug users (IDUs)

The UAM survey of IDUs monitors HIV, hepatitis B and hepatitis C in injectors in contact with specialist services, such as needle exchanges, or on treatment programmes, such as methadone maintenance. Those who agree to participate provide either an oral fluid sample, or since 2009 a dried blood spot sample, and complete a behavioural questionnaire. Detailed methods used for the survey have been published previously<sup>i,ii</sup>. The survey of IDUs has been ongoing since 1990 in England and Wales, and was extended to Northern Ireland in 2002. Further information about the UAM and comprehensive tables of data are available at: [www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1202115519183](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1202115519183)

### Unlinked Anonymous Hepatitis C Testing of stored samples from IDUs in Scotland

Health Protection Scotland holds epidemiological information, including risk category (e.g. IDUs) and laboratory number, on all persons who have had a named HIV antibody test in Scotland since 1989. This allows the identification of residual blood from IDUs held at participating laboratories, which had been stored following their HIV antibody tests. Prior to testing for Hepatitis C antibodies, patient identifiers are irreversibly unlinked from their corresponding specimens, although selected non-identifying information (gender, age group, source laboratory/geographical area) is retained for epidemiological analysis<sup>iii</sup>.

<sup>i</sup> Unlinked Anonymous HIV Surveys Steering Group. Prevalence of HIV in the United Kingdom, Data to end of 1998. London: Department of Health, Public Health Laboratory Service, Institute of Child Health (London), Scottish Centre for Infection and Environmental Health; 1999.

<sup>ii</sup> Noone A, Durante AJ, Brady AR, Majid F, Swan AV, Parry JV, et al. HIV infection in injecting drug users attending centres in England and Wales, 1990-1991. *AIDS* 1993; 7: 1501-7.

<sup>iii</sup> Hutchinson SJ, McIntyre PG, Molyneaux P, Cameron S, Burns S, Taylor A, Goldberg DJ. Prevalence of hepatitis C among injectors in Scotland 1989-2000: declining trends among young injectors halt in the late 1990s. *Epidemiol & Infect* 2002; 128: 473-7.

### **Needle Exchange Surveillance Initiative (NESI)**

The aim of NESI is to measure and monitor the prevalence of hepatitis C and injecting risk behaviours among injecting drug users in Scotland. The initiative is funded by the Scottish Government as part of the Scottish Hepatitis C Action Plan. A cross-sectional voluntary anonymous survey approach was used to recruit and interview injectors during June 2008 to June 2009. Trained interviewers recruited participants from selected needle exchange services and pharmacies that provide injecting equipment. Clients attending these services were invited to take part if they had ever injected drugs. After providing informed consent, participants completed a short interviewer-administered questionnaire and provided a voluntary blood spot sample for anonymous hepatitis C testing<sup>iv</sup>.

### **Reference laboratory submissions**

The key source of data on *S. aureus* infections in IDUs is through referral of isolates to the Staphylococcus Reference Unit (part of CfI) for reference microbiology.

Isolate referrals to the national reference laboratory, the Respiratory and Systemic Infection Laboratory (part of CfI), are one of the primary sources of Group A Streptococcal (GAS) infection reports.

Data on clostridial infections is also available from reference microbiology work. For botulism, this is carried out by Foodborne Pathogens Reference Unit and for tetanus by Respiratory and Systemic Infection Laboratory. For the other clostridia, this is undertaken by the Anaerobe Reference Laboratory, NPHS Microbiology Cardiff.

### **Notifications of infectious diseases**

Clinicians throughout the UK are required by law to report a number of defined conditions to their local communicable disease specialist. Tetanus and hepatitis A, B and C are among these notifiable diseases.

### **Mandatory enhanced surveillance of MRSA bacteraemia**

English NHS Acute Trusts have been required to report episodes of MRSA bacteraemia since October 2005. In addition to mandatory information regarding each bacteraemia case, the system also collects further information concerning the consultant speciality, care details at the time the blood sample was taken, and risk factors associated with MRSA bacteraemia. Risk factor information is voluntarily completed.

### **Enhanced surveillance of tetanus**

Enhanced surveillance of tetanus is carried out by the CfI Immunisation, Hepatitis and Blood Safety Department. Reports are followed up with a surveillance questionnaire. [www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Tetanus/Surveillance](http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Tetanus/Surveillance)

### **Surveillance of wound botulism**

Surveillance of wound botulism among IDUs is carried out by the CfI HIV & STI Department, with Foodborne Pathogens Reference Unit. Reports are followed up with a surveillance questionnaire. [www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Botulism/GeneralInformation/botubotu020Woundbotulismcasesininjectingdrugusers](http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Botulism/GeneralInformation/botubotu020Woundbotulismcasesininjectingdrugusers)

<sup>iv</sup> University of the West of Scotland, Health Protection Scotland and West of Scotland Specialist Virology Centre. The Needle Exchange Surveillance Initiative (NESI): Prevalence of HCV and injecting risk behaviours among injecting drug users attending needle exchanges in Scotland, 2008/2009. University of the West of Scotland, April 2010.

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**339**

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